

E8Y-L

Pressure Display

Micropressure Sensor with Easy-to-Read Digital Display

- Compact design (31 × 30 × 30 mm) saves mounting space.
- Easy-to-read red LED indicator.
- Analog current output models available (E8Y-L□Y).
- Pressure port Rc (PT) 1/8 models (-R) available.
- EN and UL approved (excluding accessories E89-Y2).



Refer to *Precautions* in the instruction sheet.

Model

E8Y-L □ □ - □
(1) (2) (3)

(1) Rated pressure range

5 : 0 to 5 kPa
2 : 0 to 2 kPa
R5: 0 to 500 Pa
R2: 0 to 200 Pa

(2) Output type

C: NPN comparison output × 2 system
Y: NPN comparison output × 2 system +4 to 20 mA linear output
B: PNP comparison output × 2 system

(3) Connection port

(None) : Standard (4.5-dia. barb port)
R : Rc1/8 die-cast port

Ordering Information

Devices

| Pressure range | Comparison output | Connection port | Linear output | Model |
|----------------|--------------------|-------------------------------|---------------|-----------|
| 0 to 200 Pa | NPN open collector | Standard (4.5-dia. barb port) | — | E8Y-LR2C |
| 0 to 500 Pa | | | | E8Y-LR5C |
| 0 to 2 kPa | | | | E8Y-L2C |
| 0 to 5 kPa | | | | E8Y-L5C |
| 0 to 200 Pa | | | 4 to 20 mA | E8Y-LR2Y |
| 0 to 500 Pa | | | | E8Y-LR5Y |
| 0 to 2 kPa | | | | E8Y-L2Y |
| 0 to 5 kPa | | | | E8Y-L5Y |
| 0 to 2 kPa | | R : Rc1/8 die-cast port | — | E8Y-L2C-R |
| 0 to 5 kPa | | | | E8Y-L5C-R |
| 0 to 2 kPa | | | 4 to 20 mA | E8Y-L2Y-R |
| 0 to 5 kPa | | | | E8Y-L5Y-R |
| 0 to 5 kPa | PNP open collector | Standard (4.5-dia. barb port) | — | E8Y-L5B |

Accessories (Order Separately)

Panel Attachment Part Set (For □36 and □45 Models)

| Model |
|--------------|
| E89-Y2 *1 *2 |

*1. Includes the protection cover, guide, frame, and holder.

*2. The E89-Y2 is not a UL-certified product.

The E8Y-L is UL-certified with the E89-Y2 attached.

E8Y-L

Ratings

| Item | | E8Y-L□C / E8Y-L□B | E8Y-L□Y |
|--|-----------------------------|---|------------|
| Power supply voltage | | DC 12 to 24 V ±10% max. (with a ripple) | |
| Current consumption | | 50 mA max. | 75 mA max. |
| Pressure type | | Differential pressure | |
| Applicable fluid | | Non-corrosive gas and non-flammable gas | |
| Rated pressure range | | E8Y-LR2□: 0 to 200 Pa E8Y-LR5□: 0 to 500 Pa E8Y-L2□: 0 to 2 kPa E8Y-L5□: 0 to 5 kPa | |
| Withstand pressure | | 50 kPa | |
| Setting/Display resolution | | E8Y-LR2□, E8Y-LR5□: 1 Pa E8Y-L2□, E8Y-L5□: 10 Pa | |
| Comparison output (2 output) | Output type | E8Y-L□Y, E8Y-L□C: NPN open collector E8Y-L□B: PNP open collector | |
| | Load current | 100 mA max. | |
| | Output applied voltage | DC 30 V max. | |
| | Residual voltage | 1.0 V max. (at 100 mA load current), 0.4 V max. (at 16 mA load current) | |
| Linear output | Output current | — | 4 to 20 mA |
| | Permissible load resistance | — | 0 to 250 Ω |
| Display | Setting value | 3-digit red LED display | |
| | Comparison output | Lights up when the output transistor is ON (2 pcs) | |
| Ambient temperature range | | -10 to +55°C (with no condensation or icing) | |
| Ambient humidity range | | 25 to 85%RH (with no condensation) | |
| Ambient storage temperature range | | -25 to +65°C (with no condensation or icing) | |
| Insulation resistance | | 100 MΩ min. (500 VDC, Between the terminals and case) | |
| Withstand voltage | | AC1,000 V, 50/60 Hz, Leakage current in 1 minute: 1 mA or less (Between the terminals and case) | |
| Vibration resistance | | Frequency, 10 to 58 Hz: 0.75 mm single amplitude Frequency, 58 to 150 Hz: Acceleration 100m/s ² Sweep time: 8 minutes, number of sweeps: 4 times (each for X, Y, and Z directions) | |
| Shock resistance | | 300 m/s ² 3 times each in X, Y and Z directions | |
| Degree of protection | | IP40 (IEC) (Excluding the pressure port) | |
| Protection circuits | | Reverse polarity protection, load short-circuit protection | |
| Cable | | 5-core vinyl-insulated round cable 4 dia., 2 m | |
| Differential pressure display accuracy | | E8Y-LR2□, E8Y-LR5□: ± 20 Pa E8Y-L2□: ± 30 Pa E8Y-L5□: ± 50 Pa | |
| Temperature influence | | ± 20 Pa | |
| Airtightness | | Leakage rate 8.11 × 10 ⁻⁴ Pa·m ³ /s or less (under the application of 50 kPa) | |
| Altitude | | 2,000 m max. | |
| Installation environment | | According to Pollution Level 2 (IEC61010-1) | |
| Weight | | Approx. 80 g | |
| Accessories | | Mounting Brackets (A and B), instruction manual | |

National Regulation/Certification Standard Compliance

European EMC Directive

- EN55032 Class B
- EN61000-6-2
- EN61000-6-3

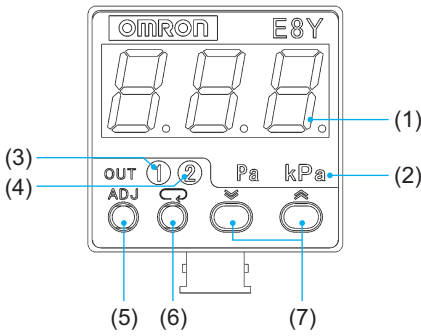
UK EMC Regulations

* Compliance assessment conducted based on harmonized standards for European EMC Directive

Certification Standards

- UL 61010-1/CSA C22.2 No.61010-1 (File No.E181661)

Name and nomenclature of Each Part



Display

(1) Numerical value/menu indication
Displays the measured pressure and some menu settings.

(2) Unit
LED displays the measuring unit (Pa, kPa).

(3) OUT 1 indication LED
In measurement mode, it lights when OUT 1 output is on.
In setting mode, it flashes when OUT 1 is being set.

(4) OUT 2 indication LED
In measurement mode, it lights when OUT 2 output is on.
In setting mode, it flashes when OUT 2 is being set.

Operation Key

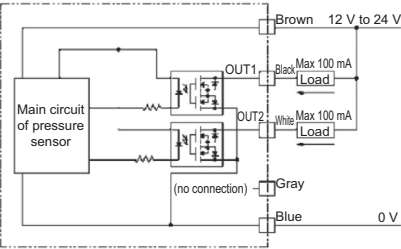
(5) ADJ
In measurement mode, it adjusts the Zero Point.
In setting mode, it shifts to measurement mode.

(6) [MODE]
In measurement mode, it shifts to setting mode and selects the current setting or menu option.

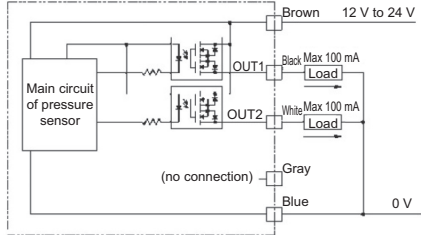
(7) [UP] / [DOWN]
In measurement mode, it displays ON and OFF points. Pushing the [DOWN] key displays OUT 1 settings; Pushing the [UP] key displays OUT 2 settings.
Change menu options and setting values in setting mode. The [UP] and [DOWN] keys increase or decrease the numeric value.

Output Circuit Diagrams/Example of Connections

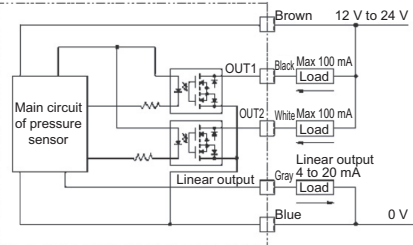
E8Y-L□C type



E8Y-L□B type



E8Y-L□Y type



E8Y-L

Dimensions

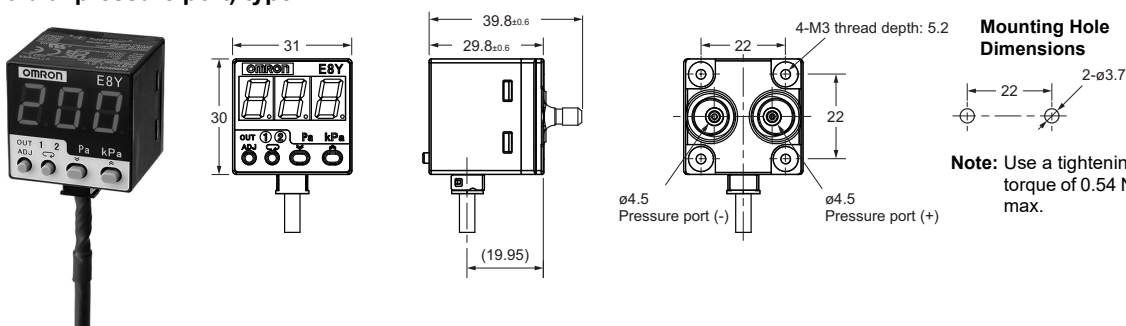
CAD Data marked products, 2D drawings and 3D CAD models are available.
For CAD information, please visit our website, which is noted on the last page.

(Unit: mm)

Devices

Standard port (4.5-dia. pressure port) type

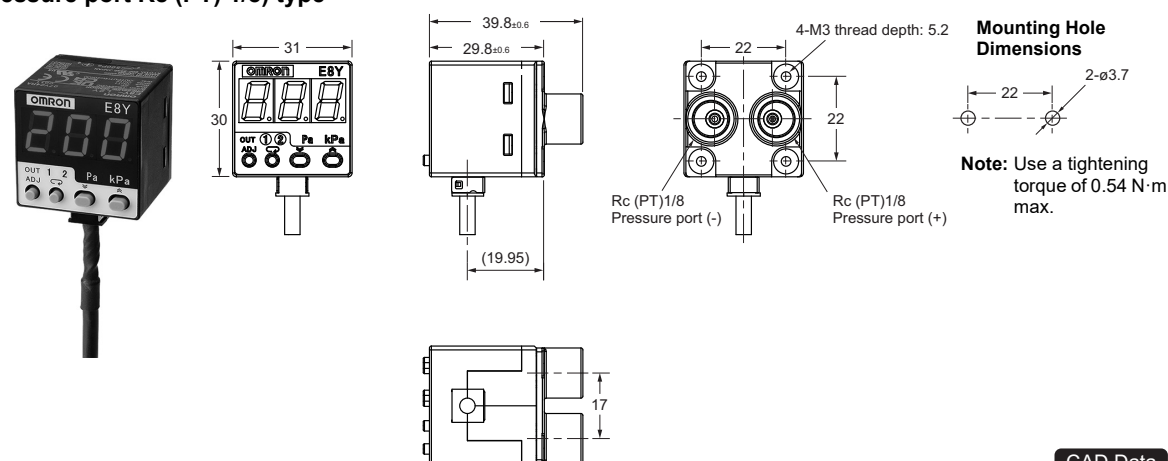
E8Y-LR2C
E8Y-LR5C
E8Y-L2C
E8Y-L5C
E8Y-L5B
E8Y-LR2Y
E8Y-LR5Y
E8Y-L2Y
E8Y-L5Y



CAD Data

Die-cast port (Pressure port Rc (PT) 1/8) type

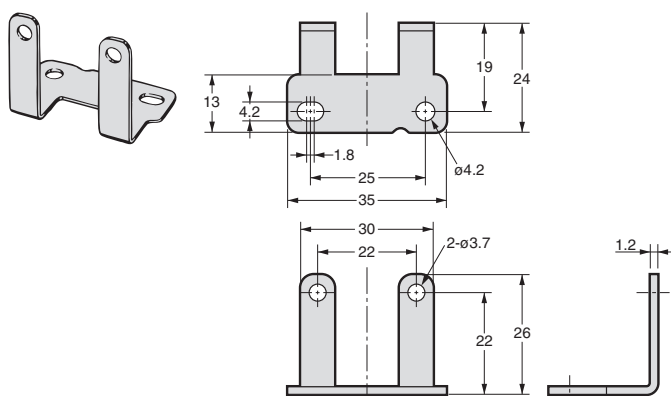
E8Y-L2C-R
E8Y-L5C-R
E8Y-L2Y-R
E8Y-L5Y-R



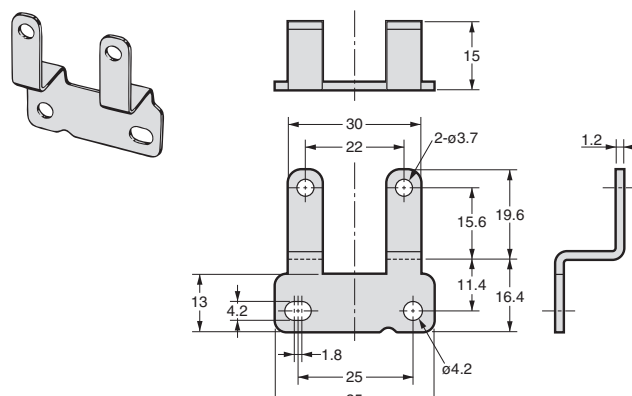
CAD Data

Accessories (included)

Mounting Brackets A



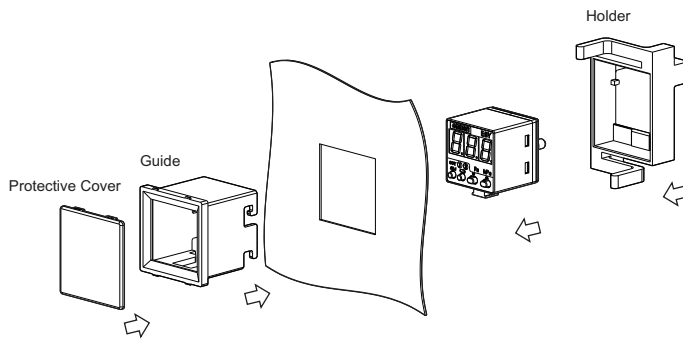
Mounting Brackets B



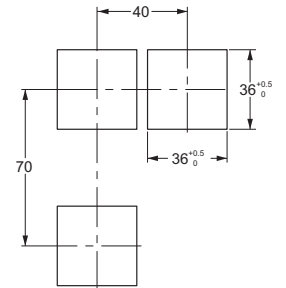
Panel Mounting/Dimensions

E89-Y2 (This model comes with a protective cover, guide, frame, and holder. Either the □36 or □45 panel can be used.)

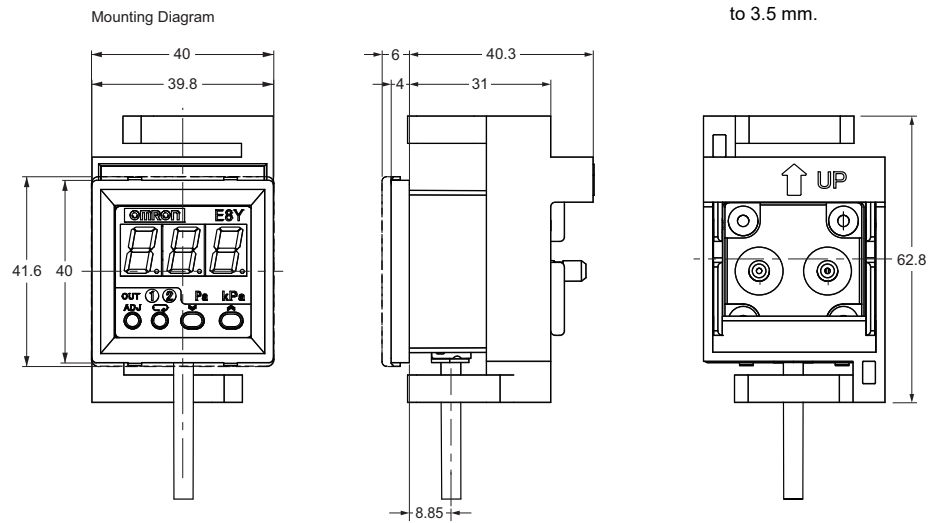
When mounted with the □36 panel



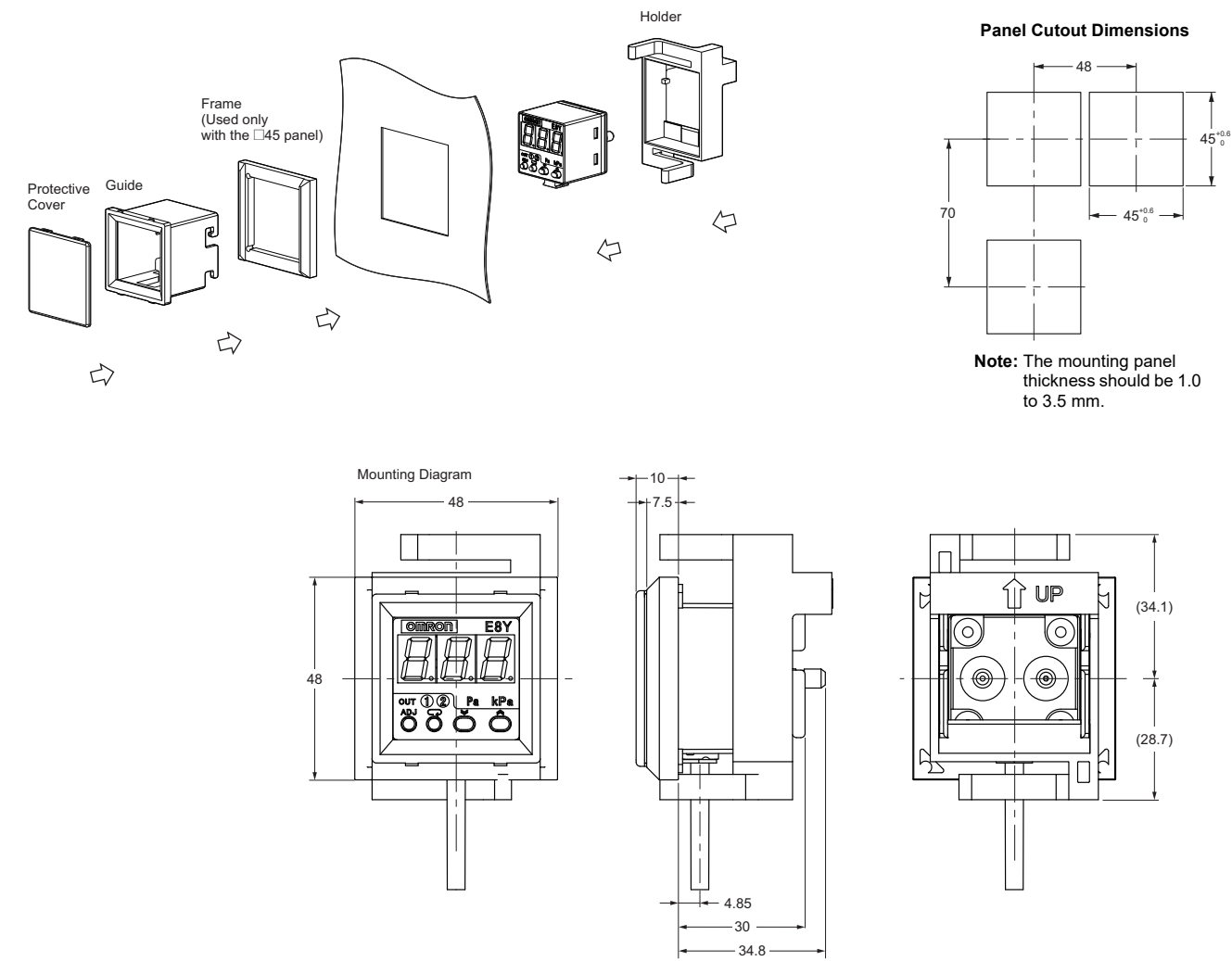
Panel Cutout Dimensions



Note: The mounting panel thickness should be 1.0 to 3.5 mm.



When mounted with the □45 panel



NOTICE

1. The product is designed for indoor use only. Do not use the product outdoors.
Do not use or store the product at places subject to direct sunlight, places exposed to outdoor environment, or places with high sea breezes.
2. Do not use the product in dusty environment.
3. Do not use or store the product at places exposed to water or oil. Do not use the product in a wet state. Entry of water may result in short-circuiting.
4. Do not use the product in environments with strong static electricity. Application of static electricity may damage the product. Take measures against static electricity when handling the product. (Example: Earthing the human body, etc.)
5. Do not use the product in environments with strong electromagnetic waves. This may cause the display pressure to fluctuate.
6. Do not use the product beyond the power supply voltage range.
7. Pay attention to incorrect wiring, such as the polarity of the power supply.
8. Do not use the product under corrosive or combustible gases.
9. Do not set up the product with a high voltage line or power line.
10. Install the sensor while ensuring that it does not come into direct contact with ultrasonic vibrations.
11. Use within rated pressure.
If pressure exceeding the rating is applied, the internal element may break.
12. Connect the piping while ensuring that the symbols (+, -) of the pressure port are correct. (+: Plus pressure port, -: Minus pressure port)
13. This product is a precision instrument. Do not drop it or apply an impact to it. If this happens, all of the product functions may not be exhibited.
14. Do not pull the cables or apply force. Pulling the cables by applying a force exceeding 50 N may result in disconnection and breakage.
15. If oil in the compressor or moisture in the air is likely to accumulate as water droplets in the pressure receiving section of the pressure sensor, the element may be destroyed. Insert an air filter and remove the moisture and oil.
16. Do not turn OFF the power supply in setting mode. If the power supply is turned OFF, data may not be saved properly.
17. Once the supply voltage is stopped, do not turn ON the power again with the remaining voltage as 0.3 V or more. This could result in malfunctioning.

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